

**PART 5—  
SCHOOL DISTRICT ANNEXES**

# CHAPTER 12. KITTTAS SCHOOL DISTRICT #403 ANNEX

## 12.1. HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Monty Sabin, Superintendent  
505 N. Pierce Street  
Kittitas, WA 98934  
Telephone: 509.968.3115  
e-mail Address: sabinm@kittitas.wednet.edu

### Alternate Point of Contact

Frank Reno, Maintenance Director  
505 N. Pierce Street  
Kittitas, WA 98934  
Telephone: 509.968.3115  
e-mail Address: renof@kittitas.wednet.edu

## 12.2. JURISDICTION PROFILE

The Kittitas School District was formed in 1907. The Kittitas School District has two schools on two campuses serving approximately 630 students with 80 employees. The District has a K-5 elementary school and a 6-12 secondary school. The Kittitas School District is operated with local, state, and federal funds, administered by a board of directors and superintendent. The Board will assume the responsibility for adoption and implementation of this plan. The following is a summary of key information about the jurisdiction:

- **Population Served**—Per the 2010 Census, the Kittitas School District has a population of 3,673 with 1,530 households.
- **Land Area Served**—603 square miles
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$486,000,000.
- **Land Area Owned**—68 acres.
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**
  - 9 School Buses                      \$444,834
  - 7 Pickups/Cars/Vans                \$74,500
  - Equipment                            \$2,057,197
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is \$2,576,531.
- **List of Critical Facilities Owned by the Jurisdiction:**
  - Primary Elementary                \$1,888,801
  - Intermediate Elementary          \$4,300,941
  - Portable Classroom                \$99,232
  - Bus Shop                              \$142,580
  - Old High School                    \$2,386,173
  - Old High School Gym                \$1,155,000

- Old High School Annex                      \$471,911
- Green House                                      \$45,901
- Secondary Building/Grounds                \$15,435,000
- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is \$25,923,539
- **Current and Anticipated Service Trends**—the Kittitas School District continues to experience an increase in enrollment. The current head count is 630 students. Ten years ago, the enrollment was 522. The District has the most affordable housing in the Kittitas Valley and has attracted people who want to relocate from major population centers to purchase land.

### **12.3. JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY**

Table 12-1 lists all past occurrences of natural hazards within the jurisdiction.

### **12.4. HAZARD RISK RANKING**

Table 12-2 presents the ranking of the hazards of concern.

### **12.5. APPLICABLE REGULATIONS AND PLANS**

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- Kittitas School District #403-Emergency Response Plan

### **12.6. CLASSIFICATION IN HAZARD MITIGATION PROGRAMS**

The jurisdiction’s classifications under various hazard mitigation programs are presented in Table 12-3.

### **12.7. HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table 12-4 lists the initiatives that make up the jurisdiction’s hazard mitigation plan. Table 12-5 identifies the priority for each initiative. Table 12-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

Type of Event	Date	Preliminary Damage Assessment
Landslide	10/11/2009	No Estimates Available
Flooding	1/9/2009	No Estimates Available
Avalanche	1/7/2009	No Estimates Available
Wind	1/29/2007	No Estimates Available
Wind	1/7/2007	No Estimates Available
Winter Weather	12/15/2006	No Estimates Available
Wind	6/21/2005	No Estimates Available
Flooding	5/4/2005	No Estimates Available
Wind	3/29/2005	No Estimates Available
Winter Weather	1/18/2005	No Estimates Available
Wildfire	7/26/2004	No Estimates Available
Wildfire	7/2/2004	No Estimates Available
Flooding	5/20/2004	No Estimates Available
Wind	4/27/2004	No Estimates Available
Avalanche	12/13/2003	No Estimates Available

Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Earthquake	54
2	Severe Weather	48
3	Flood	42
4	Dam Failure	18
4	Wild Fire	18
5	Volcano	6
6	Drought	0
6	Landslide	0
6	Avalanche	0
6	Seiche	0

	Participating?	Classification	Date Classified
Public Protection	No	—	—
Storm Ready	No	—	—
Firewise	No	—	—

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>KSD #1</b> —Remove football field light poles at former school. The poles have structurally weakened over time.						
Existing	Earthquake	1,4,9	District	\$14,750, Medium	District Funds, HMGP	Short Term
<b>KSD # 2</b> —Natural hazard event preparedness to run buildings during an outage and cut off from help.						
Existing	All Hazards	1,9,10	District	Medium	Capital/grant	Short term
<b>KSD #3</b> —Develop a continuity of operations plan that looks at sustaining operations following disasters.						
New and Existing	All Hazards	1, 9, 10	District	Medium	District Funds, DHS Grant funding	Long-term, depends on funding
<b>KSD #4</b> —Partner with other local governments in educating citizens and students on the potential consequences of natural hazards and how to prepare and respond to their impacts.						
New and Existing	All Hazards	2, 8, 9	District	Low	District General Fund	Short-term,
<b>KSD #5</b> —Continue to support through active participation the countywide initiatives identified in Volume 1 of the Kittitas County Hazard Mitigation Plan.						
New and Existing	All Hazards	All	District	Low	District Funds	Short-term ongoing
<b>KSD #6</b> —Continue to support the implementation, monitoring, maintenance, and updating of this plan, as defined in Volume 1.						
New and Existing	All Hazards	All	District	Low	District Funds, HMGP for 5-year update	Short-term ongoing

**TABLE 12-5.  
MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority <sup>a</sup>
1	3	High	Medium	Yes	No	No	Medium
2	3	High	Medium	Yes	Yes	Yes	High
3	3	High	Low	Yes	Yes	No	Medium
4	3	Low	Low	Yes	Yes	Yes	High
5	10	Medium	Low	Yes	No	Yes	High
6	10	Medium	Low	Yes	Yes	Yes	High

a. See Section 1.3 for definitions of high, medium and low priorities.

**TABLE 12-6.  
ANALYSIS OF MITIGATION INITIATIVES**

Hazard Type	Initiative Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Avalanche	—	—	—	—	—	—
Dam Failure	3, 5, 6		4, 5, 6		2, 3, 5	
Drought	—	—	—	—	—	—
Earthquake	3, 5, 6	1	4, 5, 6		2, 3, 5	
Flood	3, 5, 6		4, 5, 6		2, 3, 5	
Landslide	—	—	—	—	—	—
Severe Weather	3, 5, 6		4, 5, 6		2, 3, 5	
Seiche	—	—	—	—	—	—
Volcano	3, 5, 6		4, 5, 6		2, 3, 5	
Wildfire	3, 5, 6		4, 5, 6		2, 3, 5	

1. Prevention: Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
2. Property Protection: Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
3. Public Education and Awareness: Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
4. Natural Resource Protection: Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
5. Emergency Services: Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

# CHAPTER 13. CLE ELUM – ROSLYN SCHOOL DISTRICT #404 ANNEX

## 13.1. HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Bill Davis  
2690 SR 903  
Cle Elum, WA 98922  
Telephone: 509-649-4853  
e-mail Address: davisbi@cleelum.wednet.edu

### Alternate Point of Contact

Rebecca Montgomery  
2690 SR 903  
Cle Elum, WA 98922  
Telephone: 509-649-4852  
e-mail Address: briant@cleelum.wednet.edu

## 13.2. JURISDICTION PROFILE

The Cle Elum-Roslyn School District has three schools and an administration building on one campus. In addition to this campus, the District has an offsite learning center that houses alternative learning and home-school connection. The District presently has 130 employees. The District operates with local, state, and federal funding, administered by a board of directors and superintendent. The Board will assume the responsibility for the adoption and implementation of this plan. The District's customers are the students who attend its schools. The following is a summary of key information about the jurisdiction:

The following is a summary of key information about the jurisdiction:

- **Population Served**—Students-897 as of 2011; 7379 total citizens as of 2010
- **Land Area Served**—600 square miles
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$2.8 billion
- **Land Area Owned**—49 acres
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**
  - 15 School Buses
  - 2 Light Trucks
  - 1 van
  - 5 Storage trailers
  - Bleachers
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is \$1,400,000.
- **List of Critical Facilities Owned by the Jurisdiction:**
  - The High School, valued at \$8,783,524
  - The Swiftwater Learning Center, valued at \$65,000
  - The Elementary/Middle School, valued at \$15,486,462
  - District office, valued at \$271,031

- Tractor Shed
  - Mechanic Shop/Storage
  - Bus Garage, valued at \$601,620
  - Storage Building
  - Community Leased building
  - Concession Stand
  - Ticket Booth
- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is \$25,441,000.
  - **Current and Anticipated Service Trends**—The City of Cle Elum has had a growth rate of approximately 9 percent since 2000, according to City-Data.com. The District has seen an increase in population in the last 10 years without an increase in student population due to the nature of the area being used as a second home/vacation area by a large part of the new population. This trend will probably continue for the next 10 to 15 years.

The District’s boundaries are shown on Figure 16-1.

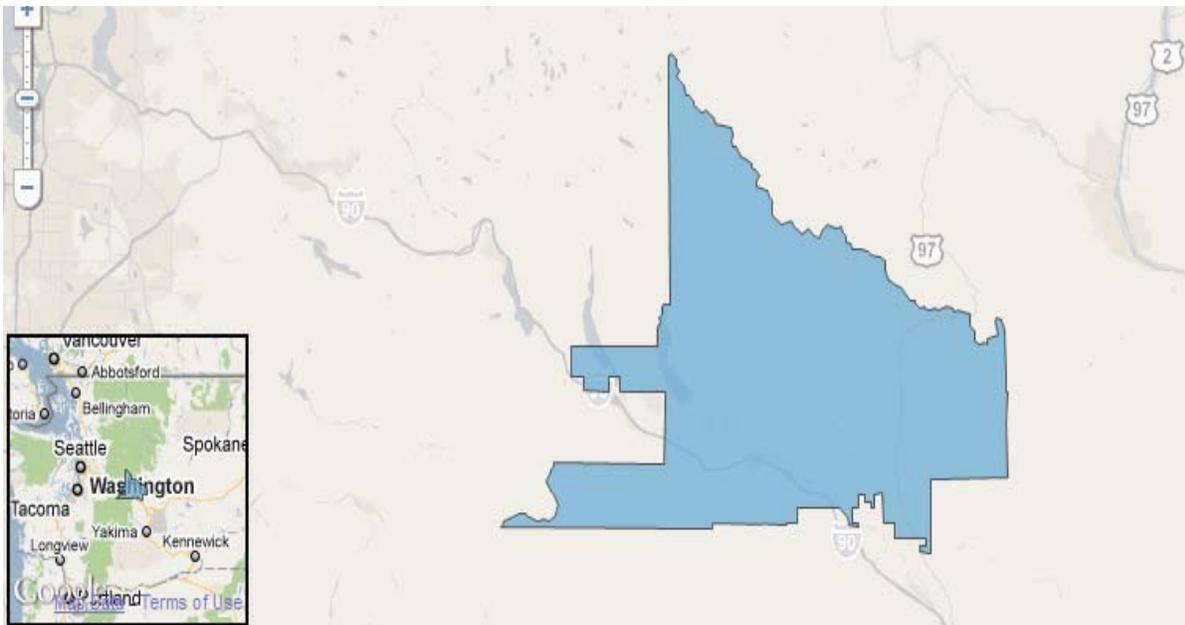


Figure 16-1. Cle Elum School District boundaries.

### 13.3. JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 13-1 lists all past occurrences of natural hazards within the jurisdiction.

### 13.4. HAZARD RISK RANKING

Table 13-2 presents the ranking of the hazards of concern.

### 13.5. APPLICABLE REGULATIONS AND PLANS

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- Cle Elum-Roslyn School District Emergency Procedure Plan

### 13.6. CLASSIFICATION IN HAZARD MITIGATION PROGRAMS

The jurisdiction’s classifications under various hazard mitigation programs are presented in Table 13-3.

### 13.7. HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES

Table 13-4 lists the initiatives that make up the jurisdiction’s hazard mitigation plan. Table 13-5 identifies the priority for each initiative. Table 13-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

TABLE 13-1. NATURAL HAZARD EVENTS		
Type of Event	Date	Preliminary Damage Assessment
Flooding	1/9/2009	N/A
Winter Weather	12/2008	\$1,800
Winter Weather	12/15/2006	Operational
Drought	5/2005	N/A
Winter Weather	1/17/2005	N/A
Drought	5/2004	N/A
Drought	7/2001	N/A
Earthquake	2/28/2001	N/A
Winter Weather	1/14/1998	N/A
Winter Weather	12/27/1996	N/A
Winter Weather	1/6/1996	N/A
Winter Weather	2/18/1993	N/A
Winter Weather	12/8/1992	N/A
Winter Weather	12/29/1990	N/A
Winter Weather	2/1/1989	N/A
Winter Weather	12/2/1985	N/A
Winter Weather	1/2/1974	N/A
Winter Weather	1/24/1972	N/A
Winter Weather	12/30/1968	N/A

TABLE 13-2. HAZARD RISK RANKING		
Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Earthquake	54
2	Flood	45
3	Severe Weather	42
4	Wildfire	42
5	Volcano	6
6	Avalanche	0
7	Dam Failure	0
8	Landslide	0
9	Drought	0
10	Seiche	0

TABLE 13-3. COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Public Protection	No	—	—
Storm Ready	No	—	—
Firewise	No	—	—

**TABLE 13-4.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>CESD #1</b> —Master storm drainage plan to route water away from structures and reduce flooding						
Existing	Flood, Severe Weather	1, 8, 10	CERSD	600,000, High	Capital/grant	Short Term
<b>CESD # 2</b> —Develop and implement a preparedness plan to run buildings during a power outage or incident that will cut off the District from help.						
Existing	All Hazards	1, 7, 9	CERSD	500,000, High	Capital/grant	Short term
<b>CESD #3</b> —Roofing enhancements K-8 facility						
Existing	Severe Weather	1, 8, 10	CERSD	Million, High	Capital/grant	Short term
<b>CESD #4</b> —Emergency lighting replacement campus wide						
Existing	All Hazards	1, 8, 10	CERSD	10,000, Medium	Capital	Short term
<b>CESD #5</b> —Seek Hazard Mitigation Assistance Grant support from competent sources such as WA Emergency Management Division, FEMA or a contractor						
New and Existing	All	1,5,6,7,8,9,10	CERSD	5000, Medium	Hazard mitigation assistance grant	Long-term, depends on funding
<b>CESD #6</b> —Participate in “Firewise” program by deploying Firewise techniques around school properties susceptible to wildfire hazards.						
New	Wildfire	1,8,10	CERSD	25,000, High	Grant Money, CERSD	Long term, depends on funding
<b>CESD #7</b> —Partner with Kittitas County, City of Cle Elum and City of Roslyn on emergency drills to better prepare for the impacts of all hazards on the District.						
New and Existing	All	1,3,9	CERSD	6000, Low	CERSD, County	Ongoing
<b>CESD #8</b> —Connect irrigation water to non-potable water source for fire suppression.						
New and Existing	All	1,2,5	CERSD	100,000, Medium	District Funds	Short term
<b>CESD #9</b> —Continue to support through active participation the countywide initiatives identified in volume 1 of the Kittitas County Hazard Mitigation Plan.						
New and Existing	All Hazards	All	District	Low	District Funds	Short-term ongoing
<b>CESD #10</b> —Continue to support the implementation, monitoring, maintenance, and updating of this plan, as defined in Volume 1.						
New and Existing	All Hazards	All	District	Low	District Funds, HMGP for 5-year update	Short-term ongoing

**TABLE 13-5.  
MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority <sup>a</sup>
1	3	High	High	Yes	Yes	No	Medium
2	3	High	High	Yes	Yes	Yes	High
3	3	High	High	Yes	Yes	No	Medium
4	3	High	High	Yes	Yes	Yes	High
5	8	Medium	Medium	Yes	Yes	No	Medium
6	3	High	High	Yes	Yes	Yes	High
7	3	High	Low	Yes	Yes	Yes	High
8	3	High	Medium	Yes	Yes	Yes	High
9	10	Medium	Low	Yes	Yes	Yes	High
10	10	Medium	Low	Yes	Yes	Yes	High

a. See Section 1.3 for definitions of high, medium and low priorities.

**TABLE 13-6.  
ANALYSIS OF MITIGATION INITIATIVES**

Hazard Type	Initiative Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Avalanche	—	—	—	—	—	—
Dam Failure	—	—	—	—	—	—
Drought	—	—	—	—	—	—
Earthquake	5,7,9, 10	5,7,8	5,7, 9, 10	5,7	5,7, 9	0
Flood	1,2, 9, 10	1,2,3, 8	9, 10	1	1, 9	1
Landslide	—	—	—	—	—	—
Severe Weather	1,2,3,4, 5,7, 9, 10	1,2,3, 8	9, 10	—	5,7, 9	—
Seiche	—	—	—	—	—	—
Volcano	5,7, 9, 10	8	9, 10	—	5,7, 9	—
Wildfire	1,2,3,4,5,7, 9, 10	1,2, 8	9, 10	—	9	—

1. Prevention: Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
2. Property Protection: Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
3. Public Education and Awareness: Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
4. Natural Resource Protection: Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
5. Emergency Services: Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

Kittitas County  
**Hazard Mitigation Plan**  
**Volume 2: Planning Partner Annexes**

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**APPENDIX A.**  
**PLANNING PARTNER EXPECTATIONS**

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## PLANNING PARTNER EXPECTATIONS

### ACHIEVING DMA COMPLIANCE FOR ALL PLANNING PARTNERS

One of the goals of the multi-jurisdictional approach to hazard mitigation planning is to achieve compliance with the Disaster Mitigation Act (DMA) for all participating members in the planning effort. DMA compliance must be certified for each member in order to maintain eligibility for the benefits under the DMA. Whether our planning process generates ten individual plans or one large plan that has a chapter for each partner jurisdiction, the following items must be addressed by each planning partner to achieve DMA compliance:

- ✓ **Participate in the process.** It must be documented in the plan that each planning partner “participated” in the process that generated the plan. There is flexibility in defining “participation”. Participation can vary based on the type of planning partner (i.e.: City or County, vs. a Special Purpose District). However, the level of participation must be defined and the extent for which this level of participation has been met for each partner must be contained in the plan context.
- ✓ **Consistency Review.** Review of existing documents pertinent to each jurisdiction to identify policies or recommendations that are not consistent with those documents reviewed in producing the “parent” plan or have policies and recommendations that complement the hazard mitigation initiatives selected (i.e.: comp plans, basin plans or hazard specific plans).
- ✓ **Action Review.** For Plan updates, a review of the strategies from your prior action plan to determine those that have been accomplished and how they were accomplished; and why those that have not been accomplished were not completed.
- ✓ **Update Localized Risk Assessment.** Personalize the Risk Assessment for each jurisdiction by removing hazards not associated with the defined jurisdictional area or redefining vulnerability based on a hazard’s impact to a jurisdiction. This phase will include:
  - A ranking of the risk
  - A description of the number and type of structures at risk
  - An estimate of the potential dollar losses to vulnerable structures
  - A general description of land uses and development trends within the community, so that mitigation options can be considered in future land use decisions.

- ✓ **Capability assessment.** Each planning partner must identify and review their individual regulatory, technical and financial capabilities with regards to the implementation of hazard mitigation actions.
- ✓ **Personalize mitigation recommendations.** Identify and prioritize mitigation recommendations specific to the each jurisdiction's defined area.
- ✓ **Create an Action Plan.**
- ✓ **Incorporate Public Participation.** Each jurisdiction must present the Plan to the public for comment at least once, within two weeks prior to adoption.
- ✓ **Plan must be adopted by each jurisdiction.**

One of the benefits to multi-jurisdictional planning is the ability to pool resources. This means more than monetary resources. Resources such as staff time, meeting locations, media resources, technical expertise will all need to be utilized to generate a successful plan. In addition, these resources can be pooled such that decisions can be made by a peer group applying to the whole and thus reducing the individual level of effort of each planning partner. This will be accomplished by the formation of a steering committee made up of planning partners and other "stakeholders" within the planning area. The size and makeup of this steering committee will be determined by the planning partnership. This body will assume the decision making responsibilities on behalf of the entire partnership. This will streamline the planning process by reducing the number of meetings that will need to be attended by each planning partner. The assembled Steering Committee for this effort will meet monthly on an as needed basis as determined by the planning team, and will provide guidance and decision making during all phases of the plan's development.

With the above participation requirements in mind, each partner is expected to aid this process by being prepared to develop its section of the plan. To be an eligible planning partner in this effort, each Planning Partner shall provide the following:

- A. A "Letter of Intent to participate" or Resolution to participate to the Planning Team (see exhibit A).
- B. Designate a lead point of contact for this effort. This designee will be listed as the hazard mitigation point of contact for your jurisdiction in the plan.
- C. Support and participate in the selection and function of the Steering Committee selected to oversee the development of this plan.
- D. Provide support in the form of mailing list, possible meeting space, and public information materials, such as newsletters, newspapers or direct mailed brochures, required to implement the public involvement strategy developed by the Steering Committee.

- E. Participate in the process. There will be many opportunities as this plan evolves to participate. Opportunities such as:
  - a. Steering Committee meetings
  - b. Public meetings or open houses
  - c. Workshops/ Planning Partner specific training sessions
  - d. Public review and comment periods prior to adoption

At each and every one of these opportunities, attendance will be recorded. Attendance records will be used to document participation for each planning partner. No thresholds will be established as minimum levels of participation. However, each planning partner should attempt to attend all possible meetings and events.

- F. There will be one **mandatory** workshop that all planning partners will be required to attend. This workshop will cover the proper completion of the jurisdictional annex template which is the basis for each partner's jurisdictional chapter in the plan. Failure to have a representative at this workshop will disqualify the planning partner from participation in this effort. The schedule for this workshop will be such that all committed planning partners will be able to attend.
- G. After participation in the mandatory template workshop, each partner will be required to complete their template and provide it to the planning team in the time frame established by the Steering Committee. Failure to complete your template in the required time frame may lead to disqualification from the partnership.
- H. Each partner will be expected to perform a "consistency review" of all technical studies, plans, ordinances specific to hazards to determine the existence of any not consistent with the same such documents reviewed in the preparation of the County (parent) Plan. For example, if your community has a floodplain management plan that makes recommendations that are not consistent with any of the County's Basin Plans, that plan will need to be reviewed for probable incorporation into the plan for your area.
- I. Each partner will be expected to review the Risk Assessment and identify hazards and vulnerabilities specific to its jurisdiction. Contract resources will provide the jurisdiction specific mapping and technical consultation to aid in this task, but the determination of risk and vulnerability will be up to each partner.
- J. Each partner will be expected to review and determine if the mitigation recommendations chosen in the parent plan will meet the needs of its jurisdiction. Projects within each jurisdiction consistent with the parent plan recommendations will need to be identified and prioritized, and reviewed to determine their benefits vs. costs.

- K. Each partner will be required to create its own action plan that identifies each project, who will oversee the task, how it will be financed and when it is estimated to occur.
- L. Each partner will be required to sponsor at least one public meeting to present the draft plan to its constituents at least 2 weeks prior to adoption.
- M. Each partner will be required to formally adopt the plan.

Templates and instructions to aid in the compilation of this information will be provided to all committed planning partners. Each partner will be expected to complete their templates in a timely manner and according to the timeline specified by the Steering Committee.

**\*\* Note\*\*:** Once this plan is completed, and DMA compliance has been determined for each partner, maintaining that eligibility will be dependant upon each partner implementing the plan implementation-maintenance protocol identified in the plan. At a minimum, this means completing the on-going plan maintenance protocol identified in the plan. Partners that do not participate in this plan maintenance strategy may be deemed ineligible by the partnership, and thus lose their DMA eligibility.

**Exhibit A**  
**Example Letter of Intent to Participate**

**Kittitas County Hazard Mitigation Planning Partnership**

C/O Laura Hendrix, Tetra Tech, Inc.  
1420 5th Ave. Suite 600  
Seattle, WA 98101-2357

Dear Kittitas County Planning Partnership,

Please be advised that the \_\_\_\_\_ (*insert City or district name*) is committed to participating in the Kittitas County Natural Hazards Mitigation Plan. As the Chief Administrative Official for this jurisdiction, I certify that I will commit all necessary resources in order to meet Partnership expectations as outlined in the “Planning Partners expectations” document provided by the planning team, in order to obtain Disaster Mitigation Act (DMA) compliance for our jurisdiction.

Mr./Ms. \_\_\_\_\_ will be the district’s point of contact for this process and they can be reached at (*insert: address, phone number and e-mail address*).

Sincerely,

\_\_\_\_\_

## Exhibit B

### Planning Team Contact information

<b>Name</b>	<b>Representing</b>	<b>Address</b>	<b>Phone</b>	<b>e-mail</b>
Christina Wollman	Kittitas County, DPW	411 N Ruby ST, Suite 1 Ellensburg WA 98926	509-962-7051	<a href="mailto:christina.wollman@co.kittitas.wa.us">christina.wollman@co.kittitas.wa.us</a>
Rob Flaner	Tetra Tech, Inc.	90 S. Blackwood Ave Eagle, ID 83616	(208) 939-4391	<a href="mailto:Rob.flaner@tetratech.com">Rob.flaner@tetratech.com</a>
Laura Hendrix	Tetra Tech, Inc.	1420 5th Ave, STE 600 Seattle, WA 98101-2357	206-883-9344	<a href="mailto:laura.hendrix@tetratech.com">laura.hendrix@tetratech.com</a>
Ed Whitford	Tetra Tech, Inc.	10101 271st Street, Stanwood, WA. 98292	(360) 629-0242	<a href="mailto:Ed.whitford@tetratech.com">Ed.whitford@tetratech.com</a>

## Exhibit C Overview of HAZUS

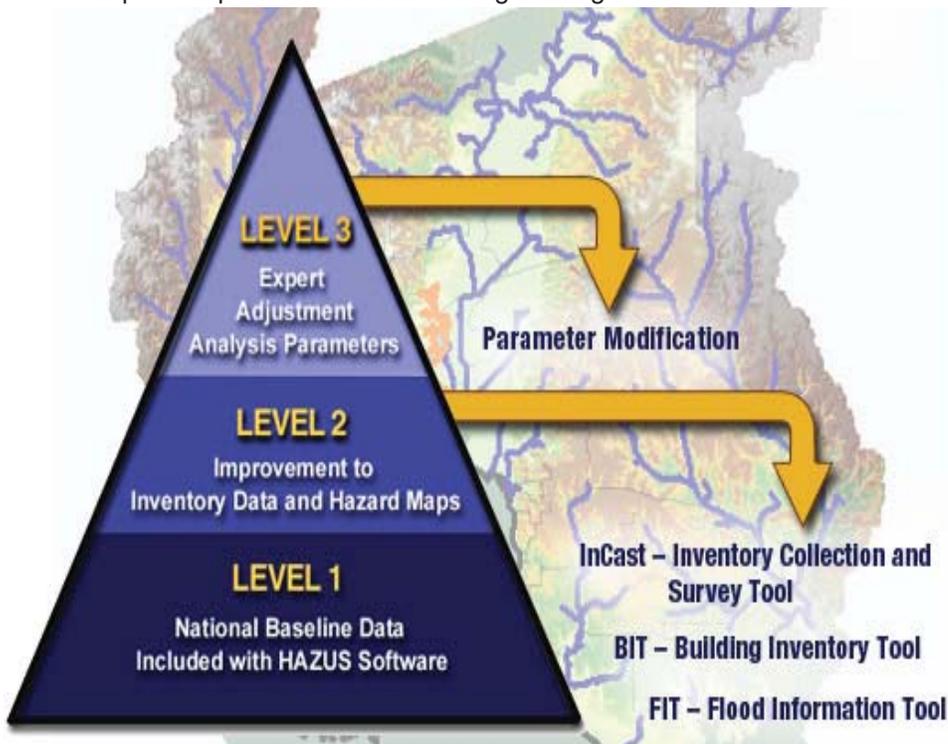
### Overview of HAZUS-MH (Multi-Hazard)

**HAZUS-MH**, is a nationally applicable standardized methodology and software program that contains models for estimating potential losses from **earthquakes**, **floods**, and **hurricane winds**. HAZUS-MH was developed by the Federal Emergency Management Agency (FEMA) under contract with the National Institute of Building Sciences (NIBS). NIBS maintains committees of wind, flood, earthquake and software experts to provide technical oversight and guidance to HAZUS-MH



development. Loss estimates produced by HAZUS-MH are based on current scientific and engineering knowledge of the effects of hurricane winds, floods, and earthquakes. Estimating losses is essential to decision-making at all levels of government, providing a basis for developing mitigation plans and policies, emergency preparedness, and response and recovery planning.

HAZUS-MH uses state-of-the-art geographic information system (GIS) software to map and display hazard data and the results



of damage and economic loss estimates for buildings and infrastructure. It also allows users to estimate the impacts of hurricane winds, floods, and earthquakes on populations. The latest release, HAZUS-MH MR1, is an updated version of HAZUS-MH that incorporates many new features which improve both the speed and functionality of the models. For information on software and hardware requirements to run HAZUS-MH MR1, see [HAZUS-MH Hardware and Software Requirements](#).

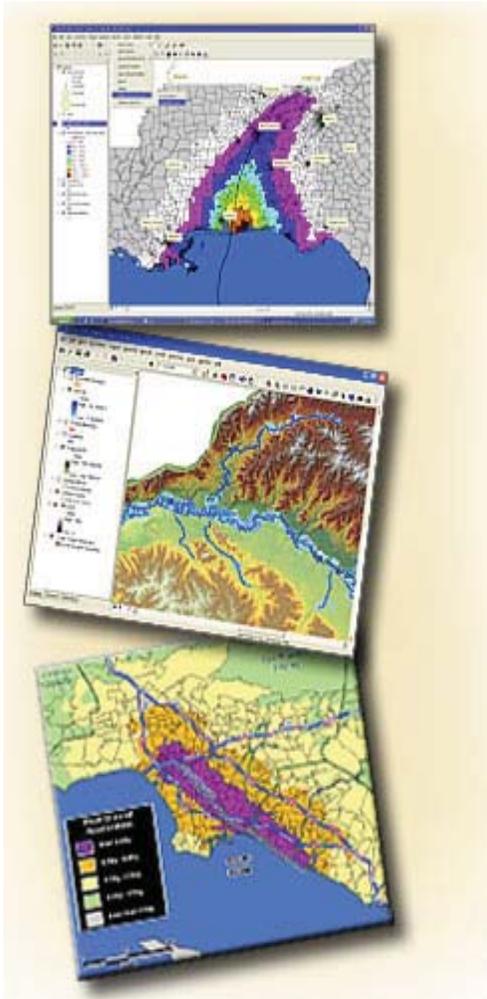
### HAZUS-MH Analysis Levels

HAZUS-MH provides for three levels of analysis:

- A **Level 1** analysis yields a rough estimate based on the nationwide database and is a great way to begin the risk assessment process and prioritize high-risk communities.

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- A **Level 2** analysis requires the input of additional or refined data and hazard maps that will produce more accurate risk and loss estimates. Assistance from local emergency management personnel, city planners, GIS professionals, and others may be necessary for this level of analysis.
- A **Level 3** analysis yields the most accurate estimate of loss and typically requires the involvement of technical experts such as structural and geotechnical engineers who can modify loss parameters based on to the specific conditions of a community. This level analysis will allow users to supply their own techniques to study special conditions such as dam breaks and tsunamis. Engineering and other expertise is needed at this level.



Three data input tools have been developed to support data collection. The **Inventory Collection Tool (InCAST)** helps users collect and manage local building data for more refined analyses than are possible with the national level data sets that come with HAZUS. InCAST has expanded capabilities for multi-hazard data collection. HAZUS-MH includes an enhanced Building Inventory Tool (BIT) allows users to import building data and is most useful when handling large datasets, such as tax assessor records. The **Flood Information Tool (FIT)** helps users manipulate flood data into the format required by the HAZUS flood model. All Three tools are included in the HAZUS-MH MR1 Application DVD.

### HAZUS-MH Models

The **HAZUS-MH Hurricane Wind Model** gives users in the Atlantic and Gulf Coast regions and Hawaii the ability to estimate potential damage and loss to residential, commercial, and industrial buildings. It also allows users to estimate direct economic loss, post-storm shelter needs and building debris. In the future, the model will include the capability to estimate wind effects in island territories, storm surge, indirect economic losses, casualties, and impacts to utility and transportation lifelines and agriculture. Loss models for other severe wind hazards will be included in the future. [Details about the Hurricane Wind Model.](#)

The **HAZUS-MH Flood Model** is capable of assessing riverine and coastal flooding. It estimates potential damage to all classes of buildings, essential facilities, transportation and utility lifelines, vehicles, and agricultural crops. The model addresses building debris generation and shelter requirements. Direct losses are estimated based on physical damage to structures, contents, and building interiors. The effects of flood warning are taken into account, as are flow velocity effects. [Details about the Flood Model.](#)

The **HAZUS-MH Earthquake Model**, The HAZUS earthquake model provides loss estimates of damage and loss to buildings, essential facilities, transportation and utility lifelines, and population based on scenario or probabilistic earthquakes. The model addresses debris generation, fire-following, casualties, and shelter requirements. Direct losses are estimated based on physical damage to structures, contents, inventory, and building interiors. The earthquake model also includes the Advanced Engineering Building Module for single- and group-building mitigation analysis. [Details about the Earthquake Model.](#)

The updated earthquake model released with HAZUS-MH includes:

- The (September 2002) National Hazard Maps

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- Project '02 attenuation functions
- Updated historical earthquake catalog (magnitude 5 or greater)
- Advanced Engineering Building Module for single and group building mitigation analysis

Additionally, HAZUS-MH can perform multi-hazard analysis by providing access to the average annualized loss and probabilistic results from the hurricane wind, flood, and earthquake models and combining them to provide integrated multi-hazard reports and graphs. HAZUS-MH also contains a third-party model integration capability that provides access and operational capability to a wide range of natural, man-made, and technological hazard models (nuclear and conventional blast, radiological, chemical, and biological) that will supplement the natural hazard loss estimation capability (hurricane wind, flood, and earthquake) in HAZUS-MH.

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**APPENDIX B.**  
**PROCEDURES FOR LINKING TO**  
**THE HAZARD MITIGATION PLAN**

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## APPENDIX B. PROCEDURES FOR LINKING TO THE HAZARD MITIGATION PLAN

Not all eligible local governments within Kittitas County are included in the Kittitas County Hazard Mitigation Plan. It is assumed that some or all of these non-participating local governments may choose to “link” to the Plan at some point to gain eligibility for programs under the federal Disaster Mitigation Act. In addition, some of the current partnership may not continue to meet eligibility requirements due to a lack of participation as prescribed by the plan. The following “linkage” procedures define the requirements established by the Plan’s Steering Committee and all planning partners for dealing with an increase or decrease in the number of planning partners linked to this plan. It should be noted that a currently non-participating jurisdiction within the defined planning area is not obligated to link to this plan. These jurisdictions can choose to do their own “complete” plan that addresses all required elements of section 201.6 of 44 CFR.

### INCREASING THE PARTNERSHIP THROUGH LINKAGE

The annual time period for the linkage process will be from [redacted] to [redacted] during any year. Eligible linking jurisdictions are instructed to complete all of the following procedures during this time frame:

- The eligible jurisdiction requests a “Linkage Package” by contacting the Point of Contact (POC) for the plan:

Name  
Title  
Address  
City, State ZIP  
Phone  
e-mail

The POC will provide a linkage packages that includes:

- Copy of Volume 1 and 2 of the plan
  - Planning partner’s expectations package.
  - A sample “letter of intent” to link to the hazard mitigation plan.
  - A Special Purpose District or City template and instructions.
  - Catalog of Hazard Mitigation Alternatives
  - A “request for technical assistance” form.
  - A copy of Section 201.6 of Chapter 44, the Code of Federal Regulations (44 CFR), which defines the federal requirements for a local hazard mitigation plan.
- The new jurisdiction will be required to review both volumes of the hazard mitigation plan, which includes the following key components for the planning area:
    - The planning area risk assessment
    - Goals and objectives
    - Plan implementation and maintenance procedures

- Comprehensive review of alternatives
- County-wide initiatives.

Once this review is complete, the jurisdiction will complete its specific annex using the template and instructions provided by the POC. Technical assistance can be provided upon request by completing the request for technical assistance form provided in the linkage package. Technical assistance may be provided by the POC or any other resource within the Planning Partnership such as a member of the Steering Committee or a currently participating City or Special Purposes District partner. The POC will determine who will provide the technical assistance and the possible level of assistance, based on resources available at the time of the request.

- The new jurisdiction will be required to develop a public involvement strategy that ensures the public’s ability to participate in the plan development process. At a minimum, the new jurisdiction must make an attempt to solicit public opinion on hazard mitigation at the onset of this linkage process and a minimum of one public meeting to present their draft jurisdiction specific annex for comment, prior to adoption by the governing body. The Planning Partnership will have resources available to aid in the public involvement strategy such as the Plan website. However, it will be the new jurisdiction’s responsibility to implement and document this strategy for incorporation into its annex. It should be noted that the jurisdictional annex templates *do not* include a section for the description of the public process. This is because the original partnership was covered under a uniform public involvement strategy that covered the planning area described in Volume 1 of the plan. Since new partners were not addressed by that strategy, they will have to initiate a new strategy, and add a description of that strategy to their annex. For consistency, new partners are encouraged to follow the public involvement format utilized by the initial planning effort as described in Volume 1 of the plan.
- Once their public involvement strategy is completed and they have completed their template, the new jurisdiction will submit the completed package to the POC for a pre-adoption review to ensure conformance with the Regional plan format.
- The POC will review for the following:
  - Documentation of public involvement strategy
  - Conformance of template entries with guidelines outlined in instructions
  - Chosen initiatives are consistent with goals, objectives and mitigation catalog of the hazard mitigation plan
  - A designated point of contact
  - A ranking of risk specific to the jurisdiction.

The POC may utilize members of the Steering Committee or other resources to complete this review. All proposed linked annexes will be submitted to the Steering Committee for review and comment prior to submittal to (state review agency).

- Plans approved and accepted by the Steering Committee will be forwarded to (state review agency) for review with a cover letter stating the forwarded plan meets local approved plan standards and whether the plan is submitted with local adoption or for criteria met/plan not adopted review.
- (state review agency) will reviews plans for federal compliance. Non-Compliant plans are returned to the Lead agency for correction. Compliant plans are forwarded to FEMA for review with annotation as to the adoption status.

- FEMA reviews the new jurisdiction’s plan in association with the approved plan to ensure DMA compliance. FEMA notifies new jurisdiction of results of review with copies to (state review agency) and approved planning authority.
- New jurisdiction corrects plan shortfalls (if necessary) and resubmits to (state review agency) through the approved plan lead agency.
- For plans with no shortfalls from the FEMA review that have not been adopted, the new jurisdiction governing authority adopts the plan (if not already accomplished) and forwards adoption resolution to FEMA with copies to lead agency and (state review agency).
- FEMA regional director notifies new jurisdiction governing authority of plan approval.

The new jurisdiction plan is then included with the regional plan with the commitment from the new jurisdiction to participate in the ongoing plan implementation and maintenance.

## DECREASING THE PARTNERSHIP

The eligibility afforded under this process to the planning partnership can be rescinded in two ways. First, a participating planning partner can ask to be removed from the partnership. This may be done because the partner has decided to develop its own plan or has identified a different planning process for which it can gain eligibility. A partner that wishes to voluntarily leave the partnership shall inform the POC of this desire in writing. This notification can occur any time during the calendar year. A jurisdiction wishing to pursue this avenue is advised to make sure that it is eligible under the new planning effort, to avoid any period of being out of compliance with the Disaster Mitigation Act.

After receiving this notification, the POC shall immediately notify both (state review agency) and FEMA in writing that the partner in question is no longer covered by the hazard mitigation plan, and that the eligibility afforded that partner under this plan should be rescinded based on this notification.

The second way a partner can be removed from the partnership is by failure to meet the participation requirements specified in the “Planning Partner Expectations” package provided to each partner at the beginning of the process, or the plan maintenance and implementation procedures specified under chapter 7 in Volume 1 of the plan. Each partner agreed to these terms by adopting the plan.

Eligibility status of the planning partnership will be monitored by the POC. The determination of whether a partner is meeting its participation requirements will be based on the following parameters:

- Are progress reports being submitted annually by the specified time frames?
- Are partners notifying the POC of changes in designated points of contact?
- Are the partners supporting the Steering Committee by attending designated meetings or responding to needs identified by the body?
- Are the partners continuing to be supportive as specified in the Planning Partners expectations package provided to them at the beginning of the process?

Participation in the plan does not end with plan approval. This partnership was formed on the premise that a group of planning partners would pool resources and work together to strive to reduce risk within the planning area. Failure to support this premise lessens the effectiveness of this effort. The following procedures will be followed to remove a partner due to the lack of participation:

- The POC will advise the Steering Committee of this pending action and provide evidence or justification for the action. Justification may include: multiple failures to submit annual

progress reports, failure to attend meetings determined to be mandatory by the Steering Committee, failure to act on the partner's action plan, or inability to reach designated point of contact after a minimum of five attempts.

- The Steering Committee will review information provided by POC, and determine action by a vote. The Steering Committee will invoke the voting process established in the ground rules established during the formation of this body.
- Once the Steering Committee has approved an action, the POC will notify the planning partner of the pending action in writing via certified mail. This notification will outline the grounds for the action, and ask the partner if it is their desire to remain as a partner. This notification shall also clearly identify the ramifications of removal from the partnership. The partner will be given 30 days to respond to the notification.
- Confirmation by the partner that they no longer wish to participate or failure to respond to the notification shall trigger the procedures for voluntary removal discussed above.
- Should the partner respond that they would like to continue participation in the partnership, they must clearly articulate an action plan to address the deficiencies identified by the POC. This action plan shall be reviewed by the Steering Committee to determine whether the actions are appropriate to rescind the action. Those partners that satisfy the Steering Committee's review will remain in the partnership, and no further action is required.
- Automatic removal from the partnership will be implemented for partners where these actions have to be initiated more than once in a 5 year planning cycle.

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**APPENDIX C.**  
**JURISDICTIONAL ANNEX INSTRUCTIONS AND TEMPLATE**  
**FOR MUNICIPALITIES**

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# INSTRUCTIONS FOR COMPLETING MUNICIPALITY ANNEX TEMPLATE

This document provides instructions for completing the annex template for city and county governments participating in multi-partner hazard mitigation planning. Assistance in completing the template will be available in the form of a workshop for all planning partners or one-on-one visits with each partner, depending on funding availability. Any questions on completing the template should be directed to:

Rob Flaner  
Tetra Tech, Inc.  
90 South Blackwood Ave.  
Eagle, ID 83616  
(208) 939-4391  
e-mail: rflaner@msn.com

Please provide both a hard copy and digital copy of the completed template to Tetra Tech upon completion.

## **Associated Materials:**

Along with the annex template and these instructions, you have been provided with other materials with information that is needed for completing the template. Be sure to review these materials **before** you begin the process of filling in the template:

- Summary-of-loss matrix for the hazard mitigation plan
- Results from the hazard mitigation plan questionnaire
- Catalog of mitigation alternatives
- Fact sheet on Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation Grant Program (PDM)

## **A Note About Software:**

The template for the municipal jurisdiction annex is a Microsoft Word document in a format that will be used in the final plan. Partners are asked to use this template so that a uniform product will be completed for each partner. Partners who do not have Microsoft Word capability may prepare the document in other formats, and the planning team will convert it to the Word format.

## CHAPTER NUMBER AND TITLE

In the chapter title at the top of Page 1, type in the complete official name of your jurisdiction (The City of Metropolis, Jefferson County, etc.). At this time, also change the name in the “header” box on Page 3, using the same wording.

Note that the template is set up as Chapter “X.” Please leave all references to “X” in the template as they are. Once all templates are received, chapter numbering will be assigned for incorporation into the final plan.

## HAZARD MITIGATION PLAN POINT OF CONTACT

Please provide the name, title, mailing address, telephone number, and e-mail address for the primary point of contact for your jurisdiction. This should be the person responsible for monitoring, evaluating and updating the annex for your jurisdiction. This person should also be the principle liaison between your jurisdiction and the Steering Committee overseeing development of this plan.

In addition, designate an alternate point of contact. This would be a person to contact should the primary point of contact be unavailable or no longer employed by the jurisdiction.

## JURISDICTION PROFILE

Provide information specific to your jurisdiction as indicated, in a style similar to the example provided in the box at right. This should be information that was not provided in the overall mitigation plan document. For population data, use the most current population figure for your jurisdiction based on an official means of tracking (e.g., the U.S. Census or state office of financial management).

## JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

### Chronological List of Hazard Events

In Table X-1, list in chronological order (most recent first) any natural hazard event that has caused damage to your jurisdiction since 1975. Include the date of the event and the estimated dollar amount of damage it caused. Please refer to the summary of natural hazard events within risk assessment of the overall hazard mitigation plan. Potential sources of damage information include:

- Preliminary damage estimates your jurisdiction filed with the county or state
- Insurance claims data
- Newspaper archives
- Other plans/documents that deal with emergency management (safety element of a comprehensive plan, emergency response plan, etc.)
- Citizen input.

### Repetitive Loss Properties

A repetitive loss property is any property for which FEMA has paid two or more flood insurance claims in excess of \$1,000 in any rolling 10-year period since 1978. In the space provided in the text for Section X.3, indicate the number of any FEMA-identified Repetitive Flood Loss properties in your jurisdiction

#### *Example Jurisdiction Profile:*

- **Date of Incorporation**—1858
- **Current Population**—17,289 as of July 2006
- **Population Growth**—Based on the data tracked by the California Department of Finance, Arcata has experienced a relatively flat rate of growth. The overall population has increased only 3.4% since 2000 and has averaged 0.74% per year from 1990 to 2007
- **Location and Description**—The City of Arcata is located on California’s redwood coast, approximately 760 miles north of Los Angeles and 275 miles north of San Francisco. The nearest seaport is Eureka, five miles south on Humboldt Bay. Arcata is the home of Humboldt State University and is situated between the communities of McKinleyville to the north and Blue Lake to the east. It sits at the intersection of US Highway 101 and State Route 299.
- **Brief History**—The Arcata area was settled during the California gold rush in the 1850s as a supply center for miners. As the gold rush died down, timber and fishing became the area’s major economic resource. Arcata was incorporated in 1858 and by 1913 the Humboldt Teachers College, a predecessor to today’s Humboldt State University was founded in Arcata. Recently, the presence of the college has come to shape Arcata’s population into a young, liberal, and educated crowd. In 1981 Arcata developed the Arcata Marsh and Wildlife sanctuary, an innovative environmentally friendly, sewage treatment enhancement system.
- **Climate**—Arcata’s weather is typical of the Northern California coast, with mild summers and cool, wet winters. It rarely freezes in the winter and it is rarely hot in the summer. Annual average rainfall is over 40 inches, with 80% of that falling in the six-month period of November through April. The average year-round temperature is 59°F. Humidity averages between 72 and 87 percent. Prevailing winds are from the north, and average 5 mph.
- **Governing Body Format**—The City of Arcata is governed by a five-member City Council. The City consists of six departments: Finance, Environmental Services, Community Development, Public Works, Police and the City Manager’s Office. The City has 13 Committees, Commissions and Task Forces, which report to the City Council.
- **Development Trends**—Anticipated development levels for Arcata are low to moderate, consisting primarily of residential development. The majority of recent development has been infill. Residentially, there has been a focus on affordable housing and a push for more secondary mother-in-law units on properties.
- The City of Arcata adopted its general plan in July 2000. The plan focuses on issues of the greatest concern to the community. City actions, such as those relating to land use allocations, annexations, zoning, subdivision and design review, redevelopment, and capital improvements, must be consistent with such a plan. Future growth and development in the City will be managed as identified in the general plan.

(your technical assistance provider will be able to help you confirm this information). If you have none, indicate “none” in the space provided.

Next, indicate the number (if any) of repetitive loss structures in your jurisdiction that have been mitigated. Mitigated for this exercise means that flood protection has been provided to the structure. If you do not know the answer to this question, the planning team will provide it for you.

## HAZARD RISK RANKING

The risk ranking performed for the overall planning area is presented in the risk assessment section of the overall hazard mitigation plan. However, each jurisdiction has differing degrees of risk exposure and vulnerability and therefore needs to rank risk for its own area, using the same methodology as used for the overall planning area. The risk-ranking exercise assesses two variables for each hazard: its probability of occurrence; and its potential impact on people, property and the economy. A detailed discussion of the concepts associated with risk ranking is provided in the overall hazard mitigation plan. The instructions below outline steps for assessing risk in your jurisdiction to develop results that are to be included in the template.

### Determine Probability of Occurrence for Each Hazard

A probability factor is assigned based on how often a hazard is likely to occur. In Table 1, list the probability of occurrence for each hazard as it pertains to your jurisdiction, along with its probability factor, as follows:

- High—Hazard event is likely to occur within 25 years (Probability Factor = 3)
- Medium—Hazard event is likely to occur within 100 years (Probability Factor = 2)
- Low—Hazard event is not likely to occur within 100 years (Probability Factor = 1)
- None—If there is no exposure to a hazard, there is no probability of occurrence (Probability Factor = 0)

Hazard Type	Probability	Probability Factor

The probability of occurrence of a hazard event is generally based on past hazard events in an area. For example, if your jurisdiction has experienced two damaging floods in the last 25 years, the probability of occurrence is high for flooding and scores a 3 under this category. If your jurisdiction has experienced no damage from landslides in the last 100 years, your probability of occurrence for landslide is low, and scores a 1 under this category.

### Determine Potential Impacts of Each Hazard

The impact of each hazard was divided into three categories: impacts on people, impacts on property, and impacts on the economy. These categories were also assigned weighted values. Impact on people was assigned a weighting factor of 3, impact on property was assigned a weighting factor of 2 and impact on the economy was assigned a weighting factor of 1. Steps to assess each type of impact are described below.

#### Impacts on People

To assess impacts on people, values are assigned based on the percentage of the total *population exposed* to the hazard event. The degree of impact on individuals will vary and is not measurable, so the calculation assumes for simplicity and consistency that all people exposed to a hazard because they live in a hazard zone will be equally impacted when a hazard event occurs. In Table 2, list the potential impact of each hazard on people in your jurisdiction, along with its impact factor, as follows:

- High Impact—50% or more of the population is exposed to a hazard (Impact Factor = 3)
- Medium Impact—25% to 49% of the population is exposed to a hazard (Impact Factor = 2)
- Low Impact—25% or less of the population is exposed to the hazard (Impact Factor = 1)
- No impact—None of the population is exposed to a hazard (Impact Factor = 0)

Hazard Type	Impact	Impact Factor	Weighted Impact Factor (Unweighted Factor x 3)

#### Impacts on Property

To assess impacts on property, values are assigned based on the percentage of the total *property value exposed* to the hazard event. In Table 3, enter the cost estimates for potential damage to exposed structures, taken from the “Summary of Loss” matrix provided with these instructions.

TABLE 3. COST ESTIMATES FOR POTENTIAL DAMAGE TO STRUCTURES	
Hazard type	Estimate of Potential Dollar Losses to Exposed Structures

In Table 4, list the potential impact of each hazard on property in your jurisdiction, along with its impact factor. Determine impact based on damage estimates from Table 3, as follows:

- High Impact—30% or more of the total assessed property value is exposed to a hazard (Impact Factor = 3)
- Medium Impact—15% to 29% of the total assessed property value is exposed to a hazard (Impact Factor = 2)
- Low Impact—14% or less of the total assessed property value is exposed to the hazard (Impact Factor = 1)
- No impact—None of the total assessed property value is exposed to a hazard (Impact Factor = 0)

TABLE 4. HAZARD IMPACT ON PROPERTY			
Hazard Type	Impact	Impact Factor	Weighted Impact Factor (Unweighted Factor x 2)

### Impacts on the Economy

To assess impacts on the economy, values are assigned based on the percentage of the total *property value vulnerable* to the hazard event. Values represent estimates of the loss from a major event of each hazard in comparison to the total assessed value of property in the county. For some hazards, such as wildland fire, landslide and severe weather, vulnerability is the same as exposure due to the lack of loss estimation tools specific to those hazards. In Table 5, list the potential impact of each hazard on the economy in your jurisdiction, along with its impact factor, as follows:

- High Impact—Estimated loss from the hazard is 20% or more of the total assessed property value (Impact Factor = 3)
- Medium Impact—Estimated loss from the hazard is 10% to 19% of the total assessed property value (Impact Factor = 2)
- Low Impact—Estimated loss from the hazard is 8% or less of the total assessed property value (Impact Factor = 1)
- No impact—No loss is estimated from the hazard (Impact Factor = 0)

Hazard Type	Impact	Impact Factor	Weighted Impact Factor (Unweighted Factor x 1)

### Determine Risk Rating for Each Hazard

A risk rating for each hazard is determined by multiplying the assigned probability factor by the sum of the weighted impact factors for people, property and the economy:

- Risk Rating = Probability Factor x Weighted Impact Factor {people + property + economy}

Using the results developed in Tables 1, 2, 4 and 5, complete Table 6 to calculate a risk rating for each hazard of concern.



- State Mandated—Enter “Yes” if state laws or other requirements enable or require the listed item to be implemented at the local level; otherwise, enter “No.”

## **Administrative and Technical Capability**

This section requires you to take inventory of the staff/personnel resources available to your jurisdiction to help with hazard mitigation planning and implementation of specific mitigation actions.

Complete Table X-4 by indicating whether your jurisdiction has access to each of the listed personnel resources. Enter “Yes” or “No” in the column labeled “Available?”. If yes, then enter the department and position title in the right-hand column.

## **Financial Resources**

Identify what financial resources (other than the Hazard Mitigation Grant Program and the Pre-Disaster Mitigation Grant Program) are available to your jurisdiction for implementing mitigation initiatives.

Complete Table X-5 by indicating whether each of the listed financial resources is accessible to your jurisdiction. Enter “Yes” if the resource is fully accessible to your jurisdiction. Enter “No” if there are limitations or prerequisites that may hinder your eligibility for this resource.

## **Community Mitigation Related Classifications**

Complete Table X-6 to indicate your jurisdiction’s participation in various national programs related to natural hazard mitigation. For each program enter “Yes” or “No” in the second column to indicate whether your jurisdiction participates. If yes, then enter the classification that your jurisdiction has earned under the program in the third column and the date on which that classification was issued in the fourth column; enter “N/A” in these columns if your jurisdiction is not participating.

## **HAZARD MITIGATION ACTION PLAN**

### **Action Plan Matrix**

Identify the initiatives your jurisdiction would like to pursue with this plan. Refer to the mitigation catalog for mitigation options you might want to consider. Be sure to consider the following factors in your selection of initiatives:

- Select initiatives that are consistent with the overall goals, objectives and guiding principles of the hazard mitigation plan.
- Identify projects where benefits exceed costs.
- Include any project that your jurisdiction has committed to pursuing regardless of grant eligibility.
- Know what is and is not grant-eligible under the HMGP and PDM (see fact sheet provided). Listing HMGP or PDM as a potential funding source for an ineligible project will be a red flag when this plan goes through review. If you have projects that are not HMGP or PDM grant eligible, but do mitigate part or all of the hazard and may be eligible for other grant programs sponsored by other agencies, include them in this section.
- Although you should identify at least one initiative for your highest ranked risk, a hazard-specific project is not required for every hazard. If you have not identified an earthquake related project, and an earthquake occurs that causes damage in your jurisdiction, you are not discounted from HMGP project grant eligibility.

Complete Table X-7 for all the initiatives you have identified:

- Enter the initiative number and description.
- Indicate whether the initiative mitigates hazards for new or existing assets.
- Identify the specific hazards the initiative will mitigate.
- Identify by number the mitigation plan objectives that the initiative addresses. These have been provided in the Steering Committee meeting minutes that were forwarded to you in the past.
- Indicate who will be the lead in administering the project. This will most likely be your governing body.
- Identify funding sources for the project. If it is a grant, include the funding sources for the cost share. Refer to your fiscal capability assessment (Table X-5) to identify possible sources of funding.
- Indicate the time line as “short term” (1 to 5 years) or “long term” (5 years or greater).

**Wording Your Initiative Descriptions:**

Descriptions of your initiatives need not provide great detail. That will come when you apply for a project grant. Provide enough information to identify the project’s scope and impact. The following are typical descriptions for an action plan initiative:

- **Initiative 1**—Address Repetitive Loss properties. Through targeted mitigation, acquire, relocate or retrofit the five repetitive loss structures in the County as funding opportunities become available.
- **Initiative 2**—Perform a non-structural, seismic retrofit of City Hall.
- **Initiative 3**—Acquire floodplain property in the Smith subdivision.
- **Initiative 4**—Enhance the County flood warning capability by joining the NOAA “Storm Ready” program.

Technical assistance will be available to your jurisdiction in completing this section during the technical assistance visit.

## Prioritization of Mitigation Initiatives

Complete the information in Table X-8 as follows:

- Initiative #—Indicate the initiative number from Table X-7.
- # of Objectives Met—Enter the number of objectives the initiative will meet.
- Benefits—Enter “High,” “Medium” or “Low” as follows:
  - High: Project will have an immediate impact on the reduction of risk exposure to life and property.
  - Medium: Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
  - Low: Long-term benefits of the project are difficult to quantify in the short term.
- Costs—Enter “High,” “Medium” or “Low” as follows:
  - High: Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.
  - Medium: Could budget for under existing work-plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
  - Low: Possible to fund under existing budget. Project is part of, or can be part of an existing ongoing program.

If you know the estimated cost of a project because it is part of an existing, ongoing program, indicate the amount.

- Do Benefits Exceed the Cost?—Enter “Yes” or “No.” This is a qualitative assessment. Enter “Yes” if the benefit rating (high, medium or low) is the same as or higher than the cost rating (high benefit/high cost; high benefit/medium cost; medium benefit/low cost; etc.). Enter “No” if the benefit rating is lower than the cost rating (medium benefit/high cost, low benefit/medium cost; etc.)
- Is the Project Grant-Eligible?—Enter “Yes” or “No.” Refer to the fact sheet on HMGP and PDM.
- Can Project Be Funded Under Existing Program Budgets?—Enter “Yes” or “No.” In other words, is this initiative currently budgeted for, or would it require a new budget authorization or funding from another source such as grants?
- Priority—Enter “High,” “Medium” or “Low” as follows:
  - High: Project meets multiple plan objectives, benefits exceed cost, funding is secured under existing programs, or is grant eligible, and project can be completed in 1 to 5 years (i.e., short term project) once funded.
  - Medium: Project meets at least 1 plan objective, benefits exceed costs, requires special funding authorization under existing programs, grant eligibility is questionable, and project can be completed in 1 to 5 years once funded.
  - Low: Project will mitigate the risk of a hazard, benefits exceed costs, funding has not been secured, project is not grant eligible, and time line for completion is long term (5 to 10 years).

This prioritization is a simple review to determine that the initiatives you have identified meet one of the primary objectives of the Disaster Mitigation Act. It is not the detailed benefit/cost analysis required for HMGP/PDM project grants. The prioritization will identify any projects whose probable benefits will not exceed the probable costs.

## **Analysis of Mitigation Actions**

Complete Table X-9 summarizing the mitigation actions by hazard of concern and the following six mitigation types:

- Prevention—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- Property Protection—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
- Public Education and Awareness—Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- Natural Resource Protection—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.

- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

This exercise demonstrates that the jurisdiction has selected a comprehensive range of actions.

## **FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

In this section, identify any future studies, analyses, reports, or surveys your jurisdiction needs to better understand its vulnerability to identified or currently unidentified risks. These could be needs based on federal or state agency mandates such as EPA's Bio-terrorism assessment requirement for water districts.

## **ADDITIONAL COMMENTS**

Use this section to add any additional information pertinent to hazard mitigation and your jurisdiction not covered in this template.

# CHAPTER X. [INSERT JURISDICTION NAME] ANNEX

## X.1 HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

[Name, Title]  
[Street Address]  
[City, State ZIP]  
Telephone: [Phone #]  
e-mail Address: [email address]

### Alternate Point of Contact

[Name, Title]  
[Street Address]  
[City, State ZIP]  
Telephone: [Phone #]  
e-mail Address: [email address]

## X.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—[Insert Date of Incorporation]
- **Current Population**—[Insert Population] as of [Insert Date of Population Count]
- **Population Growth**—[Insert Discussion of Population Growth]
- **Location and Description**—[Insert Description of Location, Surroundings, Key Geographic Features]
- **Brief History**—[Insert Summary Discussion of Jurisdiction’s History]
- **Climate**—[Insert Summary Discussion of Climate]
- **Governing Body Format**—[Insert Summary Description of Governing Body]
- **Development Trends**—[Insert Summary Description of Development]

## X.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table X-1 lists all past occurrences of natural hazards within the jurisdiction. Repetitive loss records are as follows:

- Number of FEMA Identified Repetitive Flood Loss Properties: [Insert #]
- Number of Repetitive Flood Loss Properties that have been mitigated: [Insert #]

## X.4 HAZARD RISK RANKING

Table X-2 presents the ranking of the hazards of concern.

## X.5 CAPABILITY ASSESSMENT

The assessment of the jurisdiction’s legal and regulatory capabilities is presented in Table X-3. The assessment of the jurisdiction’s administrative and technical capabilities is presented in Table X-4. The assessment of the jurisdiction’s fiscal capabilities is presented in Table X-5. Classifications under various community mitigation programs are presented in Table X-6.

## **X.6 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table X-7 lists the initiatives that make up the jurisdiction’s hazard mitigation plan. Table X-8 identifies the priority for each initiative. Table X-9 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

## **X.7 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

[Insert text, if any]

## **X.8 ADDITIONAL COMMENTS**

[Insert text, if any]



<b>TABLE X-3. LEGAL AND REGULATORY CAPABILITY</b>					
	Local Authority	State or Federal Prohibitions	Other Jurisdictional Authority	State Mandated	Comments
<b>Codes, Ordinances &amp; Requirements</b>					
Building Code					
Zonings					
Subdivisions					
Stormwater Management					
Post Disaster Recovery					
Real Estate Disclosure					
Growth Management					
Site Plan Review					
Special Purpose (flood management, critical areas)					
<b>Planning Documents</b>					
General or Comprehensive Plan					
Floodplain or Basin Plan					
Stormwater Plan					
Capital Improvement Plan					
Habitat Conservation Plan					
Economic Development Plan					
Emergency Response Plan					
Shoreline Management Plan					
Post Disaster Recovery Plan					
<b>Other</b>					
Other					

<b>TABLE X-4. ADMINISTRATIVE AND TECHNICAL CAPABILITY</b>		
Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices		
Engineers or professionals trained in building or infrastructure construction practices		
Planners or engineers with an understanding of natural hazards		
Staff with training in benefit/cost analysis		
Floodplain manager		
Surveyors		
Personnel skilled or trained in GIS applications		
Scientist familiar with natural hazards in local area		
Emergency manager		
Grant writers		

<b>TABLE X-5. FISCAL CAPABILITY</b>	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	
Capital Improvements Project Funding	
Authority to Levy Taxes for Specific Purposes	
User Fees for Water, Sewer, Gas or Electric Service	
Incur Debt through General Obligation Bonds	
Incur Debt through Special Tax Bonds	
Incur Debt through Private Activity Bonds	
Withhold Public Expenditures in Hazard-Prone Areas	
State Sponsored Grant Programs	
Development Impact Fees for Homebuyers or Developers	
Other	

TABLE X-6. COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Community Rating System			
Building Code Effectiveness Grading Schedule			
Public Protection			
Storm Ready			
Firewise			

TABLE X-7. HAZARD MITIGATION ACTION PLAN MATRIX						
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						
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<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						





Kittitas County  
**Hazard Mitigation Plan**  
**Volume 2: Planning Partner Annexes**

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**APPENDIX D.**  
**JURISDICTIONAL ANNEX INSTRUCTIONS AND TEMPLATE**  
**FOR SPECIAL-PURPOSE DISTRICTS**

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# INSTRUCTIONS FOR COMPLETING SPECIAL-PURPOSE DISTRICT ANNEX TEMPLATE

This document provides instructions for completing the annex template for special-purpose districts participating in multi-partner hazard mitigation planning. Assistance in completing the template will be available in the form of a workshop for all planning partners or one-on-one visits with each partner, depending on funding availability. Any questions on completing the template should be directed to:

Rob Flaner  
Tetra Tech, Inc.  
90 South Blackwood Ave.  
Eagle, ID 83616  
(208) 939-4391  
e-mail: rflaner@msn.com

Please provide both a hard copy and digital copy of the completed template to Tetra Tech upon completion.

## ***Associated Materials:***

Along with the annex template and these instructions, you have been provided with other materials with information that is needed for completing the template. Be sure to review these materials **before** you begin the process of filling in the template:

- Summary-of-loss matrix for the hazard mitigation plan
- Results from the hazard mitigation plan questionnaire
- Catalog of mitigation alternatives
- Fact sheet on Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation Grant Program (PDM)

## ***A Note About Software:***

The template for the special-purpose district annex is a Microsoft Word document in a format that will be used in the final plan. Partners are asked to use this template so that a uniform product will be completed for each partner. Partners who do not have Microsoft Word capability may prepare the document in other formats, and the planning team will convert it to the Word format.

## **CHAPTER NUMBER AND TITLE**

In the chapter title at the top of Page 1, type in the complete official name of your jurisdiction (West County Fire Protection District #1, Burgville Flood Protection District, etc.). At this time, also change the name in the “header” box on Page 3, using the same wording.

Note that the template is set up as Chapter “X.” Please leave all references to “X” in the template as they are. Once all templates are received, chapter numbering will be assigned for incorporation into the final plan.

## **HAZARD MITIGATION PLAN POINT OF CONTACT**

Please provide the name, title, mailing address, telephone number, and e-mail address for the primary point of contact for your jurisdiction. This should be the person responsible for monitoring, evaluating and updating the annex for your jurisdiction. This person should also be the principle liaison between your jurisdiction and the Steering Committee overseeing development of this plan.

In addition, designate an alternate point of contact. This would be a person to contact should the primary point of contact be unavailable or no longer employed by the jurisdiction.

# JURISDICTION PROFILE

## Narrative Profile

Please provide a brief summary to profile your jurisdiction. Include the purpose of the jurisdiction, the date of inception, the type of organization, the number of employees, the mode of operation (i.e., how operations are funded), the type of governing body, and who has adoptive authority. Describe who the jurisdiction's customers are (if applicable, include number of users or subscribers). Include a geographical description of the service area.

Provide information in a style similar to the example provided in the box at right. This should be information that was not provided in the overall mitigation plan document.

## Summary Information

Complete the bulleted list of summary information as follows:

- **Population Served**—List the estimated population that your jurisdiction provides services to. If you do not know this number directly, create an estimate (e.g., the number of service connections times the average household size for the service area based on Census data).
- **Land Area Served**—Enter the service area of your jurisdiction in acres or square miles.
- **Value of Area Served**—Enter the approximate assessed value of your service area. If you do not have this information, the County should be able to provide a number using the County Assessor's database.
- **Land Area Owned**—Enter the area of property owned by the jurisdiction in acres or square miles.
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction**—List all infrastructure and equipment that is critical to your jurisdiction's operations and is located in a natural hazard risk zone. Briefly describe the item and give its estimated replacement-cost value. Examples are as follows:
  - Fire Districts—Apparatus and equipment housed in a facility that is located in a natural hazard risk zone. This is the equipment that is essential for you to deliver services to this area should a natural hazard occur. It is not necessary to provide a detailed inventory of each engine and truck and its contents. A summary will suffice, such as "5 Engines, 2 ladders, and their contents". Do not list reserve equipment.
  - Dike/Flood Control Districts—Miles of levees, pump stations, retention/detention ponds, tide gates, miles of ditches, etc., within natural hazard risk zones.
  - Water Districts—Total length of pipe (it is not necessary to specify size and type), pump stations, treatment facilities, dams and reservoirs, within natural hazard risk zones.

### *Example Jurisdiction Narrative Profile:*

- Humboldt Community Services District is a special-purpose district created in 1952 to provide water, sewer, and street lighting to the unincorporated area surrounding the City of Eureka known as Pine Hill & Cutten. The District's designated service areas expanded throughout the years to include other unincorporated areas of Humboldt County known as Myrtle town, Humboldt Hill, Fields Landing, King Salmon, and Freshwater. A five-member elected Board of Directors governs the District. The Board assumes responsibility for the adoption of this plan; the General Manager will oversee its implementation. As of April 30, 2007, the District serves 7,305 water connections and 6,108 sewer connections, with a current staff of 21. Funding comes primarily through rates and revenue bonds..

- Public Utility Districts—Miles of power line (above ground and underground), generators, power generating sub-stations, miles of pipeline, etc., within natural hazard risk zones.
- School Districts—Anything within natural hazard risk zones, besides school buildings, that is critical for you to operate (e.g., school buses if you own a fleet of school buses).
- **Total Value of Critical Infrastructure/Equipment**—Enter total replacement-cost value of the critical infrastructure and equipment listed above.
- **List of Critical Facilities Owned by the Jurisdiction**—List all buildings and other facilities that are critical to your jurisdiction’s operations and are located in a natural hazard risk zone. Briefly describe the facility and give its estimated replacement-cost value.
- **Total Value of Critical Facilities**—Enter total replacement-cost value of the critical facilities listed above.
- **Current and Anticipated Service Trends**—Enter a brief description on how your jurisdiction’s services are projected to expand in the foreseeable future and why. Note any identified capital improvements needed to meet the projected expansion. Examples are as follows:
  - For a Fire District: Portions of the jurisdiction have experienced a 13 percent growth over the last five years. Land use designations allow for an increase in light commercial and residential land uses within the service area. This increase in density of land uses will represent an increase in population and thus a projected increase in call volume. Our District is experiencing an average annual increase in call volume of 13 percent.
  - For Dike/Drainage/Flood Control District: Portions of the jurisdiction have experienced a 13 percent growth over the last five years. Land use designations allow for an increase in light commercial and residential land uses within the service area. This increase in density of land use will result in an increase in impermeable surface within our service area and thus increase the demand on control facilities.
  - For a Water District: Portions of the jurisdiction have experienced a 13 percent growth over the last five years. Land use designations allow for an increase in light commercial and residential land uses within the service area. This increase in density of land use will represent an increase in the number of housing units within the service area and thus represent an expansion of the district’s delivery network.

## Boundary Map

Maps that illustrate the service area boundary for all special-purpose district partners will be provided at the workshop. Please confirm that the boundaries reflected on the maps are current and accurate for your jurisdiction. In the box for this section, include a reference to the map that includes your jurisdiction’s boundaries.

## JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

In Table X-1, list in chronological order (most recent first) any natural hazard event that has caused damage to your jurisdiction since 1975. Include the date of the event and the estimated dollar amount of damage it caused. Please refer to the summary of natural hazard events within risk assessment of the overall hazard mitigation plan. Potential sources of damage information include:

- Preliminary damage estimates your jurisdiction filed with the county or state
- Insurance claims data

- Newspaper archives
- Other plans/documents that deal with emergency management (safety element of a comprehensive plan, emergency response plan, etc.)
- Citizen input.

## HAZARD RISK RANKING

The risk ranking performed for the overall planning area is presented in the risk assessment section of the overall hazard mitigation plan. However, each jurisdiction has differing degrees of risk exposure and vulnerability and therefore needs to rank risk for its own area, using the same methodology as used for the overall planning area. The risk-ranking exercise assesses two variables for each hazard: its probability of occurrence; and its potential impact on people, property and operations. A detailed discussion of the concepts associated with risk ranking is provided in the overall hazard mitigation plan. The instructions below outline steps for assessing risk in your jurisdiction to develop results that are to be included in the template.

### Determine Probability of Occurrence for Each Hazard

A probability factor is assigned based on how often a hazard is likely to occur. In Table 1, list the probability of occurrence for each hazard as it pertains to your jurisdiction, along with its probability factor, as follows:

- High—Hazard event is likely to occur within 25 years (Probability Factor = 3)
- Medium—Hazard event is likely to occur within 100 years (Probability Factor = 2)
- Low—Hazard event is not likely to occur within 100 years (Probability Factor = 1)
- None—If there is no exposure to a hazard, there is no probability of occurrence (Probability Factor = 0)

TABLE 1. HAZARD PROBABILITY OF OCCURRENCE		
Hazard Type	Probability	Probability Factor

The probability of occurrence of a hazard event is generally based on past hazard events in an area. For example, if your jurisdiction has experienced two damaging floods in the last 25 years, the probability of occurrence is high for flooding and scores a 3 under this category. If your jurisdiction has experienced no damage from landslides in the last 100 years, your probability of occurrence for landslide is low, and scores a 1 under this category.

### Determine Potential Impacts of Each Hazard

The impact of each hazard was divided into three categories: impacts on people, impacts on property, and impacts on your jurisdiction’s operations. These categories were also assigned weighted values. Impact on people was assigned a weighting factor of 3, impact on property was assigned a weighting factor of 2 and impact on operations was assigned a weighting factor of 1. Steps to assess each type of impact are described below.

#### Impacts on People

To assess impacts on people, values are assigned based on the percentage of the total *population exposed* to the hazard event. The degree of impact on individuals will vary and is not measurable, so the calculation assumes for simplicity and consistency that all people exposed to a hazard because they live in a hazard zone will be equally impacted when a hazard event occurs. In Table 2, list the potential impact of each hazard on people in your jurisdiction, along with its impact factor, as follows:

- High Impact—50% or more of the population is exposed to a hazard (Impact Factor = 3)
- Medium Impact—25% to 49% of the population is exposed to a hazard (Impact Factor = 2)
- Low Impact—25% or less of the population is exposed to the hazard (Impact Factor = 1)
- No impact—None of the population is exposed to a hazard (Impact Factor = 0)

Hazard Type	Impact	Impact Factor	Weighted Impact Factor (Unweighted Factor x 3)

#### Impacts on Property

To assess impacts on property, values are assigned based on the percentage of the total *value of buildings, equipment and infrastructure that is exposed* to the hazard event. In Table 3, enter the cost estimates for potential damage to the jurisdiction’s exposed buildings, equipment and infrastructure, taken from the “Summary of Loss” matrix provided with these instructions.

<b>TABLE 3. COST ESTIMATES FOR POTENTIAL DAMAGE TO STRUCTURES</b>	
Hazard type	Estimate of Potential Dollar Losses to Jurisdiction- Owned Facilities Exposed to the Hazard

In Table 4, list the potential impact of each hazard on property in your jurisdiction, along with its impact factor. Determine impact based on damage estimates from Table 3, as follows:

- High Impact—50% or more of the total assessed property value of facilities, equipment and infrastructure is exposed to a hazard (Impact Factor = 3)
- Medium Impact—25% to 49% of the total assessed property value of facilities, equipment and infrastructure is exposed to a hazard (Impact Factor = 2)
- Low Impact—24% or less of the total assessed property value of facilities, equipment and infrastructure is exposed to the hazard (Impact Factor = 1)
- No impact—None of the total assessed property value of facilities, equipment and infrastructure is exposed to a hazard (Impact Factor = 0)

<b>TABLE 4. HAZARD IMPACT ON PROPERTY</b>			
Hazard Type	Impact	Impact Factor	Weighted Impact Factor (Unweighted Factor x 2)

**Impacts on the Jurisdiction’s Operations**

Impact on operations is assessed based on estimates of *how long it will take your jurisdiction to become 100-percent operable* after a hazard event. The estimated functional downtime for critical facilities has been estimated for most hazards within the planning area. In Table 5, list the potential impact of each hazard on the operations of your jurisdiction, along with its impact factor, as follows:

- High = functional downtime of 365 days or more (Impact Factor = 3)
- Medium = Functional downtime of 180 to 364 days (Impact Factor = 2)
- Low = Functional downtime of 180 days or less (Impact Factor = 1)
- No Impact = No functional downtime is estimated from the hazard (Impact Factor = 0)

TABLE 5. HAZARD IMPACT ON OPERATIONS			
Hazard Type	Impact	Impact Factor	Weighted Impact Factor (Unweighted Factor x 1)

You will need to consult the risk assessment for this task. The critical facilities exposed to each hazard have been identified, and the impacts on operability have been estimated for most of the hazards within the planning area. If the functional downtime component has not been provided for a hazard in the risk assessment, consider the impact on operability of that hazard to be low.

**Determine Risk Rating for Each Hazard**

A risk rating for each hazard is determined by multiplying the assigned probability factor by the sum of the weighted impact factors for people, property and operations:

- Risk Rating = Probability Factor x Weighted Impact Factor {people + property + operations}

Using the results developed in Tables 1, 2, 4 and 5, complete Table 6 to calculate a risk rating for each hazard of concern.



## HAZARD MITIGATION ACTION PLAN

### Action Plan Matrix

Identify the initiatives your jurisdiction would like to pursue with this plan. Refer to the mitigation catalog for mitigation options you might want to consider. Be sure to consider the following factors in your selection of initiatives:

- Select initiatives that are consistent with the overall goals, objectives and guiding principles of the hazard mitigation plan.
- Identify projects where benefits exceed costs.
- Include any project that your jurisdiction has committed to pursuing regardless of grant eligibility.
- Know what is and is not grant-eligible under the HMGP and PDM (see fact sheet provided). Listing HMGP or PDM as a potential funding source for an ineligible project will be a red flag when this plan goes through review. If you have projects that are not HMGP or PDM grant eligible, but do mitigate part or all of the hazard and may be eligible for other grant programs sponsored by other agencies, include them in this section.
- Although you should identify at least one initiative for your highest ranked risk, a hazard-specific project is not required for every hazard. If you have not identified an earthquake related project, and an earthquake occurs that causes damage in your jurisdiction, you are not discounted from HMGP project grant eligibility.

Complete Table X-4 for all the initiatives you have identified:

- Enter the initiative number and description.
- Indicate whether the initiative mitigates hazards for new or existing assets.
- Identify the specific hazards the initiative will mitigate.
- Identify by number the mitigation plan objectives that the initiative addresses. These have been provided in the Steering Committee meeting minutes that were forwarded to you in the past.
- Indicate who will be the lead in administering the project. This will most likely be your governing body.
- Identify funding sources for the project. If it is a grant, include the funding sources for the cost share.
- Indicate the time line as “short term” (1 to 5 years) or “long term” (5 years or greater).

#### ***Wording Your Initiative Descriptions:***

Descriptions of your initiatives need not provide great detail. That will come when you apply for a project grant. Provide enough information to identify the project's scope and impact. The following are typical descriptions for an action plan initiative:

- **Initiative 1**—Address Repetitive Loss properties. Through targeted mitigation, acquire, relocate or retrofit the five repetitive loss structures in the County as funding opportunities become available.
- **Initiative 2**—Perform a non-structural, seismic retrofit of City Hall.
- **Initiative 3**—Acquire floodplain property in the Smith subdivision.
- **Initiative 4**—Enhance the County flood warning capability by joining the NOAA “Storm Ready” program.

Technical assistance will be available to your jurisdiction in completing this section during the technical assistance visit.

### Prioritization of Mitigation Initiatives

Complete the information in Table X-5 as follows:

- Initiative #—Indicate the initiative number from Table X-4.
- # of Objectives Met—Enter the number of objectives the initiative will meet.
- Benefits—Enter “High,” “Medium” or “Low” as follows:
  - High: Project will have an immediate impact on the reduction of risk exposure to life and property.
  - Medium: Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
  - Low: Long-term benefits of the project are difficult to quantify in the short term.
- Costs—Enter “High,” “Medium” or “Low” as follows:
  - High: Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.
  - Medium: Could budget for under existing work-plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
  - Low: Possible to fund under existing budget. Project is part of, or can be part of an existing ongoing program.

If you know the estimated cost of a project because it is part of an existing, ongoing program, indicate the amount.

- Do Benefits Exceed the Cost?—Enter “Yes” or “No.” This is a qualitative assessment. Enter “Yes” if the benefit rating (high, medium or low) is the same as or higher than the cost rating (high benefit/high cost; high benefit/medium cost; medium benefit/low cost; etc.). Enter “No” if the benefit rating is lower than the cost rating (medium benefit/high cost, low benefit/medium cost; etc.)
- Is the Project Grant-Eligible?—Enter “Yes” or “No.” Refer to the fact sheet on HMGP and PDM.
- Can Project Be Funded Under Existing Program Budgets?—Enter “Yes” or “No.” In other words, is this initiative currently budgeted for, or would it require a new budget authorization or funding from another source such as grants?
- Priority—Enter “High,” “Medium” or “Low” as follows:
  - High: Project meets multiple plan objectives, benefits exceed cost, funding is secured under existing programs, or is grant eligible, and project can be completed in 1 to 5 years (i.e., short term project) once funded.
  - Medium: Project meets at least 1 plan objective, benefits exceed costs, requires special funding authorization under existing programs, grant eligibility is questionable, and project can be completed in 1 to 5 years once funded.
  - Low: Project will mitigate the risk of a hazard, benefits exceed costs, funding has not been secured, project is not grant eligible, and time line for completion is long term (5 to 10 years).

This prioritization is a simple review to determine that the initiatives you have identified meet one of the primary objectives of the Disaster Mitigation Act. It is not the detailed benefit/cost analysis required for

HMGP/PDM project grants. The prioritization will identify any projects whose probable benefits will not exceed the probable costs.

## **Analysis of Mitigation Actions**

Complete Table X-6 summarizing the mitigation actions by hazard of concern and the following six mitigation types:

- **Prevention**—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- **Property Protection**—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
- **Public Education and Awareness**—Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- **Natural Resource Protection**—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

This exercise demonstrates that the jurisdiction has selected a comprehensive range of actions.

## **FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

In this section, identify any future studies, analyses, reports, or surveys your jurisdiction needs to better understand its vulnerability to identified or currently unidentified risks. These could be needs based on federal or state agency mandates such as EPA's Bio-terrorism assessment requirement for water districts.

## **ADDITIONAL COMMENTS**

Use this section to add any additional information pertinent to hazard mitigation and your jurisdiction not covered in this template.

# CHAPTER X. [INSERT JURISDICTION NAME] ANNEX

## X.1 HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

[Name, Title]  
[Street Address]  
[City, State ZIP]  
Telephone: [Phone #]  
e-mail Address: [email address]

### Alternate Point of Contact

[Name, Title]  
[Street Address]  
[City, State ZIP]  
Telephone: [Phone #]  
e-mail Address: [email address]

## X.2 JURISDICTION PROFILE

[Insert Narrative Profile Information, per Instructions]

The following is a summary of key information about the jurisdiction:

- **Population Served**—[Insert Population] as of [Insert Date of Population Count]
- **Land Area Served**—[Insert Area]
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is [Insert Total Value]
- **Land Area Owned**—[Insert Area]
- **List of Critical Infrastructure/Equipment Owned by the Jurisdiction:**
  - [Insert Description of Item] [Insert Value of Item]
  - [Insert Description of Item] [Insert Value of Item]
  - [Insert Description of Item] [Insert Value of Item]
  - [Insert Description of Item] [Insert Value of Item]
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is [Insert Total Value]
- **List of Critical Facilities Owned by the Jurisdiction:**
  - [Insert Description of Item] [Insert Value of Item]
  - [Insert Description of Item] [Insert Value of Item]
  - [Insert Description of Item] [Insert Value of Item]
  - [Insert Description of Item] [Insert Value of Item]
- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is [Insert Total Value]
- **Current and Anticipated Service Trends**—[Insert Summary Description of Service Trends]

The jurisdiction's boundaries are shown on Figure [Insert # of Figure Showing Jurisdiction Boundaries]

### **X.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY**

Table X-1 lists all past occurrences of natural hazards within the jurisdiction.

### **X.4 HAZARD RISK RANKING**

Table X-2 presents the ranking of the hazards of concern.

### **X.5 APPLICABLE REGULATIONS AND PLANS**

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- [Insert Name of Code, Ordinance, Policy or Plan]
- [Insert Name of Code, Ordinance, Policy or Plan]
- [Insert Name of Code, Ordinance, Policy or Plan]
- [Insert Name of Code, Ordinance, Policy or Plan]
- [Insert Name of Code, Ordinance, Policy or Plan]
- [Insert Name of Code, Ordinance, Policy or Plan]

### **X.6 CLASSIFICATION IN HAZARD MITIGATION PROGRAMS**

The jurisdiction's classifications under various hazard mitigation programs are presented in Table X-3.

### **X.7 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES**

Table X-4 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table X-5 identifies the priority for each initiative. Table X-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

### **X.8 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

[Insert text, if any]

### **X.9 ADDITIONAL COMMENTS**

[Insert text, if any]



**TABLE X-3.  
COMMUNITY CLASSIFICATIONS**

	Participating?	Classification	Date Classified
Public Protection			
Storm Ready			
Firewise			

**TABLE X-4.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						
<b>Initiative #—Description</b>						
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<b>Initiative #—Description</b>						



